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ABSTRACT

The study examined selected demographic and educational characteristics of transfer students attending Mason City, Iowa's North Iowa Area Community College (NIACC) and the relative effect of college attendance on student academic achievement, student satisfaction with the college experience, and the college's fulfillment of general education goals. Surveys from 327 (NIACC) transfer students were analyzed and 17 hypotheses were tested. The NIACC transfer students showed no significant differences compared to other students in several areas, among them: (1) cumulative semester credit hours; (2) student satisfaction; (3) grade point average upon graduation from a baccalaureate-granting institution; and (4) satisfaction about their preparation for the work place and as individuals, family members, or citizens. Additionally, it was found that a high percentage of NIACC students persisted to complete a four-year degree, the quantity of semester hours earned at the community college had little or no relation to student outcomes, and the length of community college attendance was not detrimental to selected student outcomes. Considerations for future transfer student research are provided. An appendix details survey results and lists study hypotheses. Contains 10 references. (GLR)

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DEFINING THE COMMUNITY COLLEGE TRANSFER STUDENT, TRANSFER RATES, AND DATA SETS

A SYMPOSIUM

presented at

THE ASSOCIATION FOR THE STUDY OF HIGHER EDUCATION
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Red Lion - Jantzen Beach
Portland Oregon

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ASSOCIATION FOR THE STUDY OF HIGHER EDUCATION

This paper was presented at the annual meeting of the Association for the Study of Higher Education held at the Red Lion-Jantzen Beach in Portland, Oregon, November 1-4, 1990. This paper was reviewed by ASHE and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC collection of ASHE conference papers.

DEFINING THE COMMUNITY COLLEGE TRANSFER STUDENT, TRANSFER RATES, AND DATA SETS

INTRODUCTION

Definitions of the community college transfer student and subsequent transfer rates to baccalaureate-granting institutions are numerous and conflicting. In addition, little, if any, consistency from definition to definition exists. This deficiency creates largely incomparable data sets, lack of conformity, and to a larger degree, inaccuracy in data reports. Indeed, Cohen and Brawer (1984, p. 3) have stated:

> "The first problem is that no one knows exactly how many students begin in a community college and transfer. The pattern is confounded by people who transfer after one semester; people who begin at the university, return to the community college for a time, and then transfer the university again; people who take courses at a local community college and university branch concurrently; those who start at a community college and drop-out for a couple of years before entering the university; and so on. Nationwide, probably fewer than five percent of the students who begin at a community college complete two years there and then transfer to a university. Probably another seven or eight percent begin at a community college and transfer without completing two years. But those figures are merely educated guesses based on incomplete data from various states."

The aforementioned case-in-point illustrates the current status of defining the transfer student, transfer rates, as well as data sources. This shortcoming has implications for state policy issues toward community college and the community college mission. Moreover, policy-makers still struggle with higher education assistance distribution criteria. Education Secretary Lauro Cavazos, for example, has planned to award Pell Grants on

persistence rates (Chronicle of Higher Education, 1990). Clearly, a proactive response should be initiated to assist in the defining of the community college transfer student, transfer rates, and appropriate data sources.

Defining the transfer student, transfer rates, and vitalizing an accurate, meaningful dataset has failed, in part, due to planned ignorance. Indeed, Eaton (1990, p. 19) stated "Community college educators can simply profess lack of knowledge about transfer rates and transfer activity . . . Ignorance can be a base from which community college educators make claims about a successful transfer function. This ignorance can be sustained through a failure to collect and evaluate meaningful institutional data on transfer." Cohen (1990) suggested planned ignorance as a vehicle to avoid statistical comparisons between the community college and their baccalaureate-granting counterparts.

The lack of concise, consistent, and relevant data regarding the transfer student, be it planned or neglected, is no longer acceptable. Accountability is now demanded by legislators, accrediting associations, parents, students, and taxpaying constituents. To this end, North Iowa Area Community College, a 3,600 FTE institution, located in North Central Iowa, underwent a self-study during the fall of 1989 through the spring of 1990.

CONCEPTUAL FRAMEWORK AND DESIGN

This study described selected demographic and educational characteristics of North Iowa Area Community College transfer students. In addition, this study determined the relative effect of college attendance on student academic achievement, student satisfaction with the college experience, and the College's fulfillment of general education goals.

This study tested the general hypothesis that the effect of the community college on the transfer student varies with the amount of exposure (attendance) to the college environment. The specific amount of college exposure was measured by cumulative semester credit hours earned. Simply stated, the greater the cumulative number of semester credit hours earned, the greater the college effect in academic achievement at a baccalaureate-granting institution and the greater student satisfaction with community college experience.

This study determined the relative effect of college attendance on transfer student academic achievement at a baccalaureate-granting institution, student satisfaction with the community college experience, and student satisfaction with five general education goals. In addition, this study described selected demographic and educational characteristics of North Iowa Area Community College transfer students. The study answered the following research questions:

1. Did difference exist in length of exposure (attendance) and the ACT composite score, high school grade point average, gender, and education level of parents at the time of the transfer student's enrollment at the community college.
2. Did differences exist in transfer student satisfaction in four general education goals and length of exposure (attendance) at the community college?
3. Did differences exist in transfer student satisfaction with the community college experience and student satisfaction in four general education goals?

4. Did differences exist in transfer student academic performance at a baccalaureate-granting institution and length of exposure (attendance) at the community college?
5. Did differences exist in transfer student incoming characteristics and student satisfaction in four general education goals?

This was a theoretical research study. This study used the conceptual model developed by Astin (1965a, 1966, 1970a, 1970) as the basis for investigation. This student development model (see Figure 1) was comprised of three components: Student Incoming Characteristics, the College Environment, and Student Outcomes. Each are presented more fully in Figure 1:

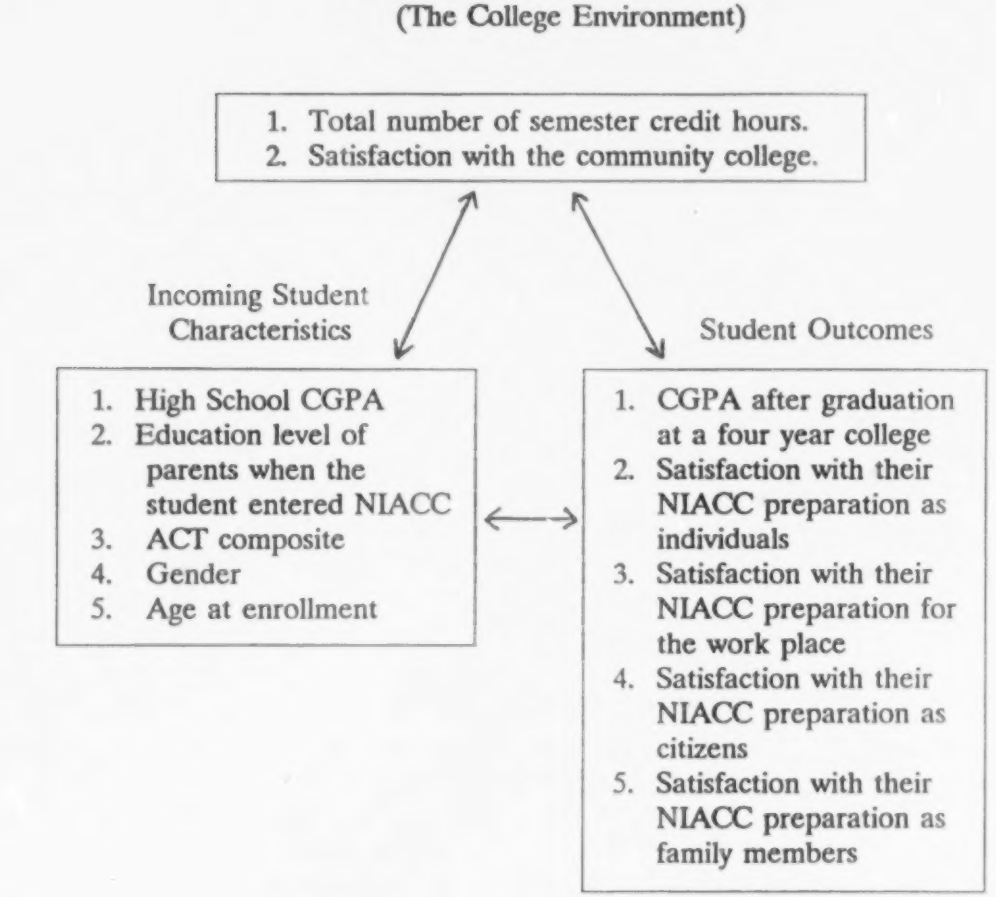
NIACC Effects on Transfer Students
(The College Environment)
1. Total number of semester credit hours.
2. Satisfaction with the community college.
Incoming Student Characteristics
Student Outcomes
1. High School CGPA
2. Education level of parents when the student entered NIACC
3. ACT composite
4. Gender
5. Age at enrollment
1. CGPA after graduation at a four year college
2. Satisfaction with their NIACC preparation as individuals
3. Satisfaction with their NIACC preparation for the work place
4. Satisfaction with their NIACC preparation as citizens
5. Satisfaction with their NIACC preparation as family members

Figure 1. Model for inquiry of the effects of the community college on transfer students (Adapted from Astin [1970a] Sociology of Education)

The relationship between the three components of Astin's model is indicated by arrows (see Figure 1). For example, student outcomes may be impacted by either the college environment, student incoming characteristics, or both. In addition, interaction

effects may occur with student incoming characteristics and the college environment. Consequently, the present investigation has approached the issue of college attendance and transfer student outcomes by the experience of attending college. Therefore, the likelihood of these outcomes should be the greatest for the transfer student with the longest attendance at the community college.

SCOPE

This study consisted of a cohort of transfer students at North Iowa Area Community College of Mason City, Iowa, who entered the College between the fall of 1981 and the summer of 1983.

It was not the intent to the study to examine all possible effects on all college students. Instead, this study examined the length of exposure to college effects, as measured by total semester credit hours achieved at North Iowa Area Community College and student satisfaction with their NIACC experience as reported on a mail survey. Student satisfaction was determined to be a subjective, individual, self-assessment with regard to his/her general education outcomes and college experience.

This study did not seek to understand the nature or type of college impact. Rather, this dissertation determined the extent to which length of community college exposure (attendance) and student satisfaction effected cumulative grade point average at the transfer institution.

The population studies consisted of all first-time Arts and Science and Career Option students enrolled at North Iowa Area Community College of Mason City, Iowa, from fall, 1981, to summer, 1983.

The sample was comprised of transfer students who had enrolled between the fall semester of 1981 and the spring semester of 1983 inclusive. The study sample was self-selected insofar as only those transfer students with both an ACT composite score and a high school cumulative grade point average listed on their permanent student record at NIACC were included.

Briefly, the sampling procedure consisted of obtaining data from sampled students from four sources: 1) NIACC student enrollment cards; 2) NIACC permanent student records; 3) Mail surveys; and 4) Transfer institution permanent student records. All data sources in this study were provided to the researcher while maintaining the confidentiality of each student.

This examination of community college effects on transfer students was delimited to the extent that is included only those first time students who indicated, upon entry to the college, an Arts and Science or Career Option classification. The study was further delimited in that it included only from North Iowa Area Community College in Mason City, Iowa, and considered only those students who entered the college between the fall semester of 1981 and the summer semester of 1983. Finally, the lack of commonly accepted definitions for measuring the concepts of job satisfaction and program satisfaction was also deemed to be a delimitation.

PROCEDURES AND FINDINGS

This study examined the NIACC enrollment cards and permanent student transcript of each sampled student. In addition, a mail-out survey, distributed to the sample, obtained the following data:

- Transfer institution
- Community college satisfaction
- Father's educational level at the time of student enrollment
- College activity involvement
- Current college status
- Mother's educational level at the time of student enrollment

The study's data analyses involved both descriptive, non-parametric, and parametric statistics. Descriptive statistics were used with all sample variables. Specifically, the descriptives included count, percentage, mean, and standard deviation. Analysis of Variance (ANOVA), constituted the parametric statistical analysis. Finally, Chi-Square was used as the non-parametric test of the study variables. A Pearson Correlation was performed on all interval and ratio scale data to further examine variable relationships.

On June 12, 1989, 566 mailing list update letters, with return postcards, were mailed to the selected sample of transfer students whose NIACC permanent student records contained both ACT composite scores and high school cumulative grade point averages. Of the total mailed, 32 or 5.65 percent were returned as undeliverable, and 180 or 31.8 percent returned the mailing list update postcards. The mailing list update letter instructed the recipient to do nothing if the address on the letter was correct. It was assumed by this investigator that the remaining letters, not returned, contained correct addresses. July 6, 1989, initial survey packets were mailed to 534 (566 sampled students less 32 undeliverable)

students. By July 14, 1989, 112 or 20.97 percent of the distributed surveys were returned. On the same date, a reminder post card was mailed to all surveyed students. The postcard encouraged students who had not returned their surveys to do so as soon as possible. In addition, the postcard served as a "thank you" to those students who had returned their surveys.

By July 24, 1989, an additional 82 or 15.36 percent of the surveys were received, bringing the total of returned surveys to 194 or 36.33 percent. On July 24, 1989, a second survey packet with modified cover letter was mailed to the 340 non-respondents. By August 4, 1989, an additional 64 surveys were received which constituted an additional 11.99 percent. The total number of surveys received by that date was 258 or 48.31 percent of the total mailed. The final distribution was sent by certified mail to the remaining 276 non-respondents. This mailing netted 69 or 12.92 percent of additional surveys. The survey process was concluded on August 14, 1989, with a total of 327 or 61.24 percent of the sampled students responding to the survey.

DISCUSSION

This study was guided by a general hypothesis. This section reconsiders this hypothesis and presents responses based on the findings of the preceding section. The general hypothesis stated earlier in this paper is presented below.

> "This study tested the general hypothesis that the effect of the community college on the transfer student varies with the amount of exposure (attendance) to the college environment. The specific amount of college exposure may be measured by cumulative semester credit hours earned. Simply stated, the greater the cumulative number of semester credit hours earned, the greater the college effect in academic achievement at a

baccalaureate-granting institution, and the greater the student satisfaction with the community college experience" (Phelan, 1990).

The general hypothesis was principally addressed by Hypotheses 3, 5, 7, 9, and 11 of the study (see attachments). Each of these hypotheses failed to be rejected with the notable exception of one. Here a significant relationship was observed between semester credit hours earned at NIACC and the level of transfer student satisfaction with their NIACC preparation for the work place. No significant difference or relationship was observed between semester credit hours earned at NIACC and GPA at graduation from a baccalaureate-granting institution, student satisfaction with their NIACC preparation as individuals, as citizens, and as family members.

The effect of the community college on the transfer student did not vary according to the amount of exposure to the community college environment. The quantity of semester credit hours earned at the community college had little or no relation to student outcomes. However, the data did prove that the length of community college attendance was not detrimental to selected student outcomes.

A high percentage of students at NIACC persist to complete a four-year degree. To further refine our emerging definition of the transfer student, survey respondents were separated according to baccalaureate degree completion and non-baccalaureate degree completion. Selected student characteristics were delineated to evaluate similarities and differences between the B.A. degree completers and non-completers. Of particular note was a modest variation in semester credit hours earned. Specifically, the degree completers earned an average 59 semester credit hours prior to transfer while non-credit completers

earned an average 54 semester credit hours at the community college. This difference represented a mere 4.742 semester hours or 8.74 percent. In addition, the median for degree completers was 61.0 compared to 60.0 for non-degree completers. The mode for both groups was 60.0 semester credit hours. This indicated little value in using semester credit hours earned as a predicting variable for baccalaureate degree attainment.

Let me conclude with a few considerations for future transfer student research and transfer student definitions.

1. The location, nature of a community college should be evaluated/considered in transfer rate comparisons. For example, rurally-dispersed colleges versus metropolitan community colleges; mid-western versus eastern, etc.
2. Due to the abundance of variables involved, a single definition of a transfer rate may not be possible, even at a single institution such as NIACC. Rather, a dichotomy may be more practical. These rates should be classified as an "absolute transfer rate" and a "value-added transfer rate". The absolute transfer rate could be reserved for all students passing through community college doors and moving on to a baccalaureate-granting institution, while the value-added classification transfer rate could be reserved for those students who have been impacted/influenced by the community college. Indeed, Cohen (1990) has suggested that an indicator of transfer rate can be defined as "all students entering in a given year who have no prior college experience and who stay at

the community college long enough to complete at least 12 college credit units and who take one or more classes at the university within four years."

3. Community colleges should endeavor to define the transfer student and transfer rate immediately. Since no nationally recognized definitions exist, these definitions should institutionally operationalize their own definitions--definitions that are meaningful to themselves and their constituents.

In conclusion, this research has policy implication at national, state, and institutional levels. Among these policy issues is the need to separate the quality and quantity issues of transfer student definition. Efficiency of the transfer student passing through higher education should not be paramount, rather, the quality of that experience should be prominent. The harsh reality of this quality/quantity issue is now facing higher education. Lauro F. Cavazos, Secretary of the U. S. Department of Education, was cited by the Chronicle of Higher Education, October 3, 1990, as having plans to " . . . link federal aid to students' academic achievement and institutions' retention records." (p.1). The aforementioned research has outlined only a slight difference in semester credit hours earned by students who transfer and complete a bachelor's degree and those who do not. Education's attempt to define the transfer student will be useless if we count credit hours. Rather, we should look at the courses taken by students to see if they make sense to the students' development. We need to get beyond credit hour counting to improve the quality of the transfer student. Let's leave the bean counting to the accountants.

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APPENDIX

North Iowa Area Community College transfer student characteristics from returned surveys (N-327)

Characteristics	Median	Mean	Mode	Standard Deviation
Student Inputs:				
High School Cumulative Grade Point Average	3.070	2.993	2.830	0.578
ACT Composite Score	20.000	19.823	22.000	5.168
Student Gender (Percent)				
Male		42.8%		
Female			57.2%	
Student Age at Enrollment	18.000	18.382	18.000	2.412
College Environment				
NIACC Cumulative Semester Credit Hours Earned	60.500	55.691	60.000	23.843
Student Satisfaction with the College Experience[a]	2.000		2.000	
Student Outputs:				
Student GPA at Baccalaureate-Granting Institution at Graduation	2.910	2.925	2.830	0.450
Student Satisfaction as an Individual[a]	2.000		2.000	
Student Satisfaction in the Work Place[a]	2.000		2.000	
Student Satisfaction as a Citizen[a]	2.000		2.000	
Student Satisfaction as a Family Member[a]	2.000		2.000	
Other Characteristics:				
NIACC Cumulative Grade Point Average	2.765	2.765	2.620	0.666
Percent that received a Bachelor's Degree from a Baccalaureate-Granting Institution		30.89% (101)		

[a] Satisfaction variables used in this investigation were measured on a five-point Likert Scale (Very Satisfied - 1 to Very Dissatisfied - 5).

Hypothesis 1

There is no significant difference in cumulative semester credit hours earned by the NIACC transfer student according to the following transfer student characteristics:

a. Cumulative high school GPA
b. Education level of parents at student enrollment
c. ACT Composite Score
d. Gender
e. Age at enrollment

Hypothesis 2

There is no significant difference in transfer student satisfaction with the NIACC experience according to the following transfer student characteristics:

a. Cumulative high school GPA
b. Education level of parents at student enrollment
c. ACT composite score
d. Gender
e. Age at enrollment

Hypothesis 3

There is no significant difference in NIACC transfer student cumulative grade point average upon graduating from a baccalaureate-granting institution and the cumulative semester credit hours earned at NIACC.

Hypothesis 4

There is no significant difference in NIACC transfer student cumulative grade point average upon graduating from a baccalaureate-granting institution according to transfer student satisfaction with the NIACC experience.

Hypothesis 5

There is no significant difference in NIACC transfer student satisfaction with their preparation as individuals according to the cumulative semester credit hours earned at NIACC.

Hypothesis 6

There is no significant difference in NIACC transfer student satisfaction with their preparation as individuals according to transfer student satisfaction with the NIACC experience.

Hypothesis 7

There is no significant difference in NIACC transfer student satisfaction with their preparation for the work place according to the cumulative semester credit hours earned at NIACC.

Hypothesis 8

There is no significant difference in transfer student satisfaction with their NIACC preparation for the work place according to transfer student satisfaction with the NIACC experience.

Hypothesis 9

There is no significant difference in transfer student satisfaction with their NIACC preparation as citizens according to cumulative semester credit hours earned at NIACC.

Hypothesis 10

There is no significant difference in transfer student satisfaction with their NIACC preparation as citizens according to transfer student satisfaction with the NIACC experience.

Hypothesis 11

There is no significant difference in NIACC transfer student satisfaction with their preparation as family members according to cumulative semester credit hours earned at NIACC.

Hypothesis 12

This hypothesis tested whether transfer student satisfaction with their NIACC preparation as family members differed significantly according to their satisfaction with their experience at NIACC.

Hypothesis 13

There is no significant difference in NIACC transfer student cumulative grade point average at graduation from a baccalaureate-granting institution according to the following transfer student characteristics:

a. Cumulative high school GPA
b. Education level of parents at student enrollment
c. ACT composite score
d. Gender
e. Age at enrollment

Hypothesis 14

There is no significant difference in NIACC transfer student satisfaction with their preparation as individuals according to the following transfer student characteristics:

a. Cumulative high school GPA
b. Education level of parents at student enrollment
c. ACT composite score
d. Gender

Hypothesis 15

There is no significant difference in transfer student satisfaction with their NIACC preparation for the work place according to the following transfer student characteristics:

a. Cumulative high school GPA
b. Education level of parents at student enrollment
c. ACT composite score
d. Gender
e. Age at enrollment

Hypothesis 16

There is no significant difference in transfer student satisfaction with their NIACC preparation as family members according to the following transfer student characteristics:

a. Cumulative high school GPA
b. Education level of parents at student enrollment
c. ACT composite score
d. Gender
e. Age

Hypothesis 17

There is no significant difference in NIACC transfer student satisfaction with their preparation as citizens according to the following transfer student characteristics:

a. Cumulative high school GPA
b. Education level of parents at student enrollment
c. ACT composite score
d. Gender
e. Age at enrollment